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BIRCH, STEWART, KOLASCH & BIRCH, LLP
PO Box 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
LO, SUZANNE	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/780,649	Applicant(s) GILBERT, MICHAEL TRAVIS	
	Examiner SUZANNE LO	Art Unit 2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 March 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7,10,11,13-17,19-27,32,33 and 41-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10,11,13-17,19-27,32,33 and 41-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-7, 10-11, 13-17, 19-27, 32-33, and 41-44 have been presented.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. **Claims 1-6, 10-11, 13-17, 19-22, 24-27, 32-33, and 41-44** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitahara et al. (US. Pub 2002/0089514) in view of Shoji et al. (US. Pub 2002/0032053) in further view of Microsoft Corp. ("Microsoft Flight Simulator Information Manual and Flight Handbook") in further view of in view of National Oceanic and Atmospheric Administration ("National Weather Service"), or "NOAA".**

Consider claim 1, Kitahara et al. discloses a computer readable medium storing computer executable instructions ([0039]) configured to allow a user to set attributes of individual cells (pixel,

[0013]) in a multi-dimensional array ((image are formed by array of pixels which form a 2-dimensional array, [0013])), comprising: a) determining a value of a first attribute (color value [0013] for color of red) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013], 62 in the control screen in FIG. 16 [0141-0144]), the first attribute being associated with a first color channel (red [0016]); b) determining a value of a second attribute (color value [0013] for color of green) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), the second attribute being associated with a second color channel (green [0016]); c) determining a value of a third attribute (color value [0013] for color of blue) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), the third attribute being associated with a third color channel (blue [0016]); d) receiving user input selecting a cell in a graphical depiction of the multi- dimensional army ([0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input); e) applying the values of the first (color value [0013] for color of red), second (color value [0013] for color of green), and third attributes (color value [0013] for color of blue) to the selected cell ([0027]-[0029], FIG. 16); and f) shading the selected cell a color based on the values of the first, second, and third attributes ([0027]-[0029], FIG. 16, print image 62 in the control screen in FIG. 16 [0141-0144]) but fails to explicitly disclose wherein the attributes *are used to* define an aspect of a weather condition.

Shoji et al. discloses possible weather conditions in the map of virtual world (weather phenomenon on the image displayed, abstract, [0025]). Kitahara et al. and Shoji et al. are analogous art because they both are related to changing values of attributes on the computer software in order to change the image displayed (different weather and geographical features shown on the image of the virtual world in Shoji et al. and change attributes of the image shown on the display in Kitahara et al.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the weather conditions as taught by Shoji et al. for the image process software of Kitahara et al.

because it is possible to give more reality to weather phenomenon that is reflected on an image displayed (Shoji, [0011], [0017]).

The combination of Kitahara and Shoji fails to explicitly disclose a plurality of multi-dimensional arrays which correspond to different layers above the earth, one multi-dimensional array being above another multi-dimensional array such that *the* user can define different weather conditions for cells in the plurality of multi-dimensional arrays. Microsoft teaching setting user defined clouds and other weather conditions at different layers above the earth **(pages 66-67, Clouds and Thunderstorms)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the user defined multi-dimensional array to represent weather conditions of Kitahara and Shoji with the user defined weather conditions for a flight simulator of Microsoft in order to increase the reality of a weather phenomenon that is reflected on an image displayed **(Shoji [0011], [0017])**. The combination of Kitahara, Shoji, and Microsoft disclose *such that the user can define different weather conditions* **(Microsoft pages 66-67, Clouds and Thunderstorms**) *for each individual cell* **(Shoji, [0025])** *in the plurality of multi-dimensional arrays* **(Microsoft pages 66-67, Clouds and Thunderstorms)**.

The combination of Kitahara, Shoji, and Microsoft fails to explicitly disclose *wherein the first, second and third attributes are used together to define the aspect of the weather condition for each individual cell in the plurality of multi-dimensional arrays*. NOAA teaches using three attributes together (red, blue, green color channel intensity) to define an aspect of a weather condition for each individual cell in a multi-dimensional array **(Radar reflectivity, DBZ chart**. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the medium with instructions for configuring multi-dimensional arrays of Kitahara, Shoji, and Microsoft with the base-channel and color intensity determination of NOAA in order to easily convey the intensity of a represented weather condition.

As per claim 2, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 1, wherein the computer executable instructions further comprise repeating steps d) - f) for a plurality of user-selected cells in the graphical depiction of the multi-dimensional arrays (Kitahara, image are formed by array of pixels which form a 2-dimensional array, [0013], return in FIG. 8, FIG. 16 where a user can make a modification at any time).

As per claim 3, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 1, wherein the computer executable instructions further comprise: g) receiving user input modifying at least one of the fast, second, and third attributes (Kitahara, image are formed by array of pixels which form a 2-dimensional array, [0013], FIG. 16 where a user can do the modification); h) receiving user input selecting a second cell in the graphical depiction of the multi-dimensional arrays (Kitahara, image, [0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input); i) applying the values of the first, second, and third attributes, as modified, to the second selected cell (Kitahara, [0027]-[0029], FIG. 16); and j) shading the second selected cell a second color based on the values of the first, second, and third attributes (Kitahara, [0027]-[0029], print image 62 in the control screen in FIG. 16 [0141-0144]), as modified.

As per claim 4, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 3, wherein the computer executable instructions further comprise repeating steps h) - j) for a plurality of user-selected cells in the graphical depiction of the multi-dimensional arrays (Kitahara, return in FIG. 8).

As per claim 5, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 1, wherein step f) comprises: i) determining a first color channel intensity (Kitahara, "intensity values of primary colors", [0028] where the first primary color is red) based on the determined value of the first attribute (Kitahara, color value [0013] for color of red, [0015],[0028]); ii) determining a second color channel intensity (Kitahara, "intensity values of primary

colors”, [0028] where the first primary color is green) based on the determined value of the second attribute (Kitahara, color value [0013] for color of green, [0015],[0028]); iii) determining a third color channel intensity (Kitahara, “intensity values of primary colors”, [0028] where the first primary color is blue) based on the determined value of the third attribute (Kitahara, color value [0013] for color of blue, [0015],[0028]); and iv) combining the color channel intensities to determine the shading color (Kitahara, [0027]).

As per claim 6, the combination of Kitahara, Shoji, Microsoft, and NOAA already the computer readable medium of claim 5, wherein the first color channel is a red color channel, the second color channel is a green color channel, and the third color channel is a blue color channel (Kitahara, [0016] where three colors are red, blue and green).

As per claim 10, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 1, wherein the graphical depiction of each multi-dimensional array (Kitahara, image are formed by array of pixels which form a 2-dimensional array, [0013]) comprises a two-dimensional array (Kitahara, image are formed by array of pixels which form a 2-dimensional array, [0013]) displayed on a display device (Kitahara, in the control screen in FIG. 16 [0141-0144] image 62).

As per claim 11, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 1, wherein the computer executable instructions further comprise exporting the multi-dimensional array (Shoji, image, [0103]) in a data format usable by a computer game to simulate weather conditions (Shoji, [0061], geographic features in [0096-0097], entertainment apparatus 1 in FIG. 4).

As per claim 13, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 10 wherein each cell of the two-dimensional array (Shoji, image are formed by array of pixels which form a 2-dimensional array, [0013], [0102-0103]) corresponds to a geographical area (Shoji, geographic features in [0102-0103]).

As per claim 14, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 13, wherein the geographical area to which each cell of the two dimensional array correspond is of a same size (Shoji, [0110], FIG. 8 where shows the size of each area is the same).

As per claim 15, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 5, wherein the each color channel intensity gets darker as the determined value of the color channel's corresponding attribute gets more severe (Kitahara, FIG. 17 where the darker image is presented while change the attribute, [0149-0152]).

As per claim 16, Kitahara discloses a computer readable medium storing computer executable instructions configured to allow a user to set attributes of individual cells in a multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), comprising: a) determining a value for each of a plurality of attributes that can be applied to the multi-dimensional array ([0013], [0016], pixels which form the print image 62 in the control screen in FIG. 16 [0141-0144]); b) determining a state of a flag corresponding to each of the plurality of attributes, wherein the flag (S301 in FIG. 12) indicates whether or not the corresponding attribute should be applied to the multi-dimensional array (if S301 is yes, a color is assigned to pixels); c) receiving user input selecting a cell in a graphical depiction of the multi- dimensional array ([0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input); d) applying to the selected cell the values of each of the plurality of attributes whose flag indicates that the corresponding attribute should be applied to the multi-dimensional array ([0027]-[0029], FIG. 16); and e) providing visual feedback that the flagged attribute(s) have been applied to the selected cell (print image 62 in the control screen in FIG. 16 [0141-0144] shows any change made on the parameters) but fails to explicitly disclose wherein each attribute defines an aspect of a weather condition.

Shoji et al. discloses possible weather conditions in the map of virtual world (weather phenomenon on the image displayed, abstract, [0025]). Kitahara et al. and Shoji et al. are analogous art because they both are related to changing values of attributes on the computer software in order to change the image displayed (different weather and geographical features shown on the image of the virtual world in Shoji et al. and change attributes of the image shown on the display in Kitahara et al.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the weather conditions as taught by Shoji et al. for the image process software of Kitahara et al. because it is possible to give more reality to weather phenomenon that is reflected on an image displayed (Shoji, [0011], [0017]).

The combination of Kitahara and Shoji fails to explicitly disclose a plurality of multi-dimensional arrays which correspond to different layers above the earth, one multi-dimensional array being above another multi-dimensional array such that a user can define different weather conditions for cells in the plurality of multi-dimensional arrays. Microsoft teaching setting user defined clouds and other weather conditions at different layers above the earth **(pages 66-67, Clouds and Thunderstorms)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the user defined multi-dimensional array to represent weather conditions of Kitahara and Shoji with the user defined weather conditions for a flight simulator of Microsoft in order to increase the reality of a weather phenomenon that is reflected on an image displayed **(Shoji [0011], [0017])**. The combination of Kitahara, Shoji, and Microsoft disclose *such that the user can define different weather conditions* **(Microsoft pages 66-67, Clouds and Thunderstorms)** *for each individual cell* **(Shoji, [0025])** *in the plurality of multi-dimensional arrays* **(Microsoft pages 66-67, Clouds and Thunderstorms)**.

The combination of Kitahara, Shoji, and Microsoft fails to explicitly disclose *wherein the first, second and third attributes are used together to define the aspect of the weather condition for each individual cell in the plurality of multi-dimensional arrays.* NOAA teaches using three attributes together

(red, blue, green color channel intensity) to define an aspect of a weather condition for each individual cell in a multi-dimensional array **(Radar reflectivity, DBZ chart**. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the medium with instructions for configuring multi-dimensional arrays of Kitahara, Shoji, and Microsoft with the base-channel and color intensity determination of NOAA in order to easily convey the intensity of a represented weather condition.

As per claim 17, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 16, wherein step e) comprises shading the selected cell (Kitahara, [0027]-[0029], FIG. 16).

As per claim 19, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 16, wherein the computer executable instructions further comprise exporting the multi-dimensional arrays (Shoji, image are formed by array of pixels which form a 2-dimensional array, [0013], [0102-0103]) in a data format usable by a computer game to simulate the weather conditions (Shoji, [0061], weather model and object in [0096-0097], entertainment apparatus 1 in FIG. 4).

As per claim 20, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 17, wherein step e) comprises shading the selected cell a color based on the values of three of the plurality of attributes (Kitahara, [0027]-[0029], FIG. 16 where shows the level of color of red (R), green (G), and blue (B) can be adjusted).

As per claim 21, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 20, wherein step e) comprises: i) determining a first color channel intensity (Kitahara, "intensity values of primary colors", [0028] where the first primary color is red) based on the determined value of the first attribute (Kitahara, color value [0013] for color of red, [0015],[0028]); ii) determining a second color channel intensity (Kitahara, "intensity values of primary

colors", [0028] where the first primary color is green) based on the determined value of the second attribute (Kitahara, color value [0013] for color of green, [0015],[0028]); iii) determining a third color channel intensity (Kitahara, "intensity values of primary colors", [0028] where the first primary color is blue) based on the determined value of the third attribute (Kitahara, color value [0013] for color of blue, [0015],[0028]); and iv) combining the color channel intensities to determine the shading color (Kitahara, [0027]).

As per claim 22, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 21, wherein the first color channel is a red color channel, the second color channel is a green color channel, and the third color channel is a blue color channel (Kitahara, [0016] where three colors are red, blue and green).

As per claim 24, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 20, wherein the computer executable instructions further comprise receiving user input identifying one or more of the three attributes of the plurality of attributes (Kitahara, different attributes which a user can modify in FIG. 16).

As per claim 25, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 22, wherein the computer executable instructions further comprise receiving user input identifying which of the three attributes corresponds to each of the red, green, and blue color channels (Kitahara, FIG. 16, [0016] where three colors are red, blue and green).

As per claim 26, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 16, wherein step e) comprises shading the selected cell darker as more attributes' flags indicate that the attributes should be applied to the multi-dimensional arrays (Kitahara, image are formed by array of pixels which form a 2-dimensional array, [0013], FIG. 17 where the darker image is presented while change the attribute, [0149-0152]).

Consider claim 27, Kitahara et al. discloses a computer-readable medium storing computer executable instructions that, when executed, display a user interface on a computer display device, said user interface comprising: a first interface component displaying a list of attributes corresponding to a user-selected attribute layer, wherein *the* user can specify an attribute value corresponding to each attribute in the list (a properties box 70 in FIG. 16); and a second interface component (print image 62 in the control screen in FIG. 16 [0141-0144]) displaying a two-dimensional grid representative of a location-neutral geographical area (pixels in print image 62) wherein, when the user selects a cell within the grid ([0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input), the user interface shades the selected cell based on the current values of a plurality of attributes in the list of attributes corresponding to the user-selected attribute layer (different attributes are changeable in FIG. 16) but fails to explicitly disclose wherein each attribute defines an aspect of a weather condition.

Shoji et al. discloses possible weather conditions in the map of virtual world (weather phenomenon on the image displayed, abstract, [0025]). Kitahara et al. and Shoji et al. are analogous art because they both are related to changing values of attributes on the computer software in order to change the image displayed (different weather and geographical features shown on the image of the virtual world in Shoji et al. and change attributes of the image shown on the display in Kitahara et al.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the weather conditions as taught by Shoji et al. for the image process software of Kitahara et al. because it is possible to give more reality to weather phenomenon that is reflected on an image displayed (Shoji, [0011], [0017]).

The combination of Kitahara and Shoji fails to explicitly disclose a plurality of multi-dimensional arrays which correspond to different layers above the earth, one multi-dimensional array being above another multi-dimensional array such that a user can define different weather conditions for cells in the plurality of multi-dimensional arrays. Microsoft teaching setting user defined clouds and other weather

conditions at different layers above the earth **(pages 66-67, Clouds and Thunderstorms)**. It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the user defined multi-dimensional array to represent weather conditions of Kitahara and Shoji with the user defined weather conditions for a flight simulator of Microsoft in order to increase the reality of a weather phenomenon that is reflected on an image displayed **(Shoji [0011], [0017])**. The combination of Kitahara, Shoji, and Microsoft disclose *such that the user can define different weather conditions* **(Microsoft pages 66-67, Clouds and Thunderstorms)** *for each individual cell* **(Shoji, [0025])** *in the plurality of multi-dimensional arrays* **(Microsoft pages 66-67, Clouds and Thunderstorms)**.

The combination of Kitahara, Shoji, and Microsoft fails to explicitly disclose *wherein the first, second and third attributes are used together to define the aspect of the weather condition for each individual cell in the plurality of multi-dimensional arrays.* NOAA teaches using three attributes together (red, blue, green color channel intensity) to define an aspect of a weather condition for each individual cell in a multi-dimensional array **(Radar reflectivity, DBZ chart**. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the medium with instructions for configuring multi-dimensional arrays of Kitahara, Shoji, and Microsoft with the base-channel and color intensity determination of NOAA in order to easily convey the intensity of a represented weather condition.

As per claim 32, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer readable medium of claim 27, wherein the user-interface shades the selected cell based on a first color channel having a first color channel intensity based on a first attribute, a second color channel having a second color channel intensity based on a second attribute, and a third color channel having a third color channel intensity based on a third attribute (Kitahara, [0015],[0027-0028]).

As per claim 33, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses The computer readable medium of claim 32, wherein the first color channel is a red color channel, the

second color channel is a blue color channel, and the third color channel is a green color channel (Kitahara, [0016] where three colors are red, blue and green).

As per claim 41, Kitahara is directed to a computer system, comprising: a memory configured to store data; a display configured to display information; a controller configured to load from the memory and an input unit to perform the method steps disclosed in claim 1 and is therefore rejected over the same art combination.

As per claim 42, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer system of claim 41, wherein the user input unit further includes a selection unit configured to select a model of an aircraft to be flown through the plurality of multi-dimensional arrays **(Microsoft, page 38)**.

As per claim 43, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer system of claim 42, wherein the plurality of multi-dimensional arrays remain static such that the user can fly the aircraft through the plurality of multi-dimensional arrays and experience different weather conditions defined in the individual cells of the plurality of multi-dimensional arrays **(Microsoft, pages 66-67, Clouds and Thunderstorms)**.

As per claim 44, the combination of Kitahara, Shoji, Microsoft, and NOAA already discloses the computer system of claim 41, wherein the first, second and third weather attributes include any one of a cloud type, surface conditions, temperature, visibility characteristics and wind characteristics **(Microsoft, pages 66-68)**.

4. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kitahara et al. (US. Pub 2002/0089514) in view of National Oceanic and Atmospheric Administration ("National Weather Service"), or "NOAA" in further view of Shoji et al. (US. Pub 2002/0032053) in further view of Microsoft Corp. ("Microsoft Flight Simulator Information Manual and Flight Handbook")**.

As per claim 7, Kitahara is directed to a computer readable medium storing computer executable instructions ([0039]) configured to allow a user to set attributes of individual cells (pixel, [0013]) in a multi-dimensional array ((image are formed by array of pixels which form a 2-dimensional array, [0013])), comprising: a) determining a value of a first attribute (color value [0013] for color of red) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013], 62 in the control screen in FIG. 16 [0141-0144]), the first attribute being associated with a first color channel (red [0016]); b) determining a value of a second attribute (color value [0013] for color of green) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), the second attribute being associated with a second color channel (green [0016]); c) determining a value of a third attribute (color value [0013] for color of blue) to be applied to the multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), the third attribute being associated with a third color channel (blue [0016]); d) receiving user input selecting a cell in a graphical depiction of the multi-dimensional array ([0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input); e) applying the values of the first (color value [0013] for color of red), second (color value [0013] for color of green), and third attributes(color value [0013] for color of blue) to the selected cell ([0027]-[0029], FIG. 16); and f) shading the selected cell a color based on the values of the first, second, and third attributes ([0027]-[0029], FIG. 16, print image 62 in the control screen in FIG. 16 [0141-0144]), wherein step f) comprises: i) determining a first color channel intensity ("intensity values of primary colors", [0028] where the first primary color is red) based on the determined value of the first attribute (color value [0013] for color of red, [0015],[0028]); ii) determining a second color channel intensity ("intensity values of primary colors", [0028] where the first primary color is green) based on the determined value of the second attribute (color value [0013] for color of green, [0015],[0028]); iii) determining a third, color channel intensity ("intensity values of primary colors", [0028] where the first primary color is blue) based on the determined value of

the third attribute (color value [0013] for color of blue, [0015],[0028]); and iv) combining the color channel intensities to determine the shading color ([0027]), but fails to explicitly disclose and wherein: step i) comprises: A) determining a base-zero position of the determined value of the first attribute in a range of allowable values of the first attribute; B) determining a first multiplier by dividing a maximum allowable first color channel intensity by a base-zero position of the maximum allowable value of the first attribute; and C) determining the first color channel intensity by multiplying the first multiplier by the base-zero position of the determined value of the first attribute, step ii) comprises: A) determining a base-zero position of the determined value of the second attribute in a range of allowable values of the second attribute; B) determining a second multiplier by dividing a maximum allowable second color channel intensity by a base zero position of the maximum allowable value of the second attribute; and C) determining the second color channel intensity by multiplying the second multiplier by the base zero position of the determined value of the second attribute, and step iii) comprises: A) determining a base-zero position of the determined value of the third attribute in a range of allowable values of the third attribute; B) determining a third multiplier by dividing a maximum allowable third color channel intensity by a base zero position of the maximum allowable value of the third attribute; and C) determining the third color channel intensity by multiplying the third multiplier by the base zero position of the determined value of the third attribute and *wherein the first, second, and third attributes are used to define an aspect of a weather condition for each individual cell in a multi-dimensional array*.

NOAA teaches for each of three color channels and associated attribute, A) determining a base-zero position of the determined value of the attribute in a range of allowable values of the attribute **(Radar reflectivity, DBZ chart)**; B) determining a multiplier by dividing a maximum allowable color channel intensity by a base-zero position of the maximum allowable value of the attribute **(Radar reflectivity, DBZ chart)**; and C) determining the color channel intensity by multiplying the multiplier by the base-zero position of the determined value of the attribute **(Radar reflectivity, DBZ chart)** and

wherein the first, second, and third attributes are used to define an aspect of a weather condition for each individual cell in a multi-dimensional array **(Radar reflectivity, DBZ chart)**. Kitahara and NOAA are analogous art because they are both directed to the same field of endeavor, color assignment. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the medium with instructions for configuring a multi-dimensional array of Kitahara with the base-channel and color intensity determination of NOAA in order to easily convey the intensity of a represented condition.

The combination of Kitahara and NOAA fails to explicitly disclose wherein different weather conditions are defined for each individual cell in a multi-dimensional array. Shoji et al. discloses defining weather conditions in the map of virtual world in individual cells of a multi-dimensional array (weather phenomenon on the image displayed, abstract, [0025]). Kitahara et al., NOAA, and Shoji et al. are analogous art because they are related to changing values of attributes on the computer software in order to change the image displayed (different weather and geographical features shown on the image of the virtual world in Shoji et al. and change attributes of the image shown on the display in Kitahara et al.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the weather conditions as taught by Shoji et al. for the image process software of Kitahara et al. and NOAA because it is possible to give more reality to weather phenomenon that is reflected on an image displayed (Shoji, [0011], [0017]).

The combination of Kitahara, NOAA, and Shoji fails to explicitly disclose wherein there is a plurality of multi-dimensional arrays in which one multi-dimensional array is above another multi-dimensional array such that the user can define different weather conditions in the plurality of multi-dimensional arrays. Microsoft teaching setting user defined clouds and other weather conditions at different layers above the earth **(pages 66-67, Clouds and Thunderstorms)** thus the user can define different weather conditions in the plurality of multi-dimensional arrays where one is above the other. It

would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the user defined multi-dimensional array to represent weather conditions of Kitahara and Shoji with the user defined weather conditions for a flight simulator of Microsoft in order to increase the reality of a weather phenomenon that is reflected on an image displayed **(Shoji [0011], [0017])**.

As per claim 23, Kitahara is directed to a computer readable medium storing computer executable instructions configured to allow a user to set attributes of individual cells in a multi-dimensional array (image are formed by array of pixels which form a 2-dimensional array, [0013]), comprising: a) determining a value for each of a plurality of attributes that can be applied to the multi-dimensional array ([0013], [0016], pixels which form the print image 62 in the control screen in FIG. 16 [0141-0144]); b) determining a state of a flag corresponding to each of the plurality of attributes, wherein the flag (S301 in FIG. 12) indicates whether or not the corresponding attribute should be applied to the multi-dimensional array (if S301 is yes, a color is assigned to pixels): c) receiving user input selecting a cell in a graphical depiction of the multi-dimensional array ([0013-0014], [0023] where color assignment selection of chosen pixels is based on the user input); d) applying to the selected cell the values of each of the plurality of attributes whose flag indicates that the corresponding attribute should be applied to the multi-dimensional array ([0027]-[0029], FIG. 16); and e) providing visual feedback that the flagged attribute(s) have been applied to the selected cell (print image 62 in the control screen in FIG. 16 [0141-0144] shows any change made on the parameters), wherein step e) comprises: shading the selected cell ([0027]-[0029], FIG. 16); determining a first color channel intensity ("intensity values of primary colors", [0028] where the first primary color is red) based on the value of a first attribute (color value [0013] for color of red, [0015],[0028]); determining a second color channel intensity ("intensity values of primary colors", [0028] where the first primary color is green) based on the value of a second attribute (color value [0013] for color of green, [0015],[0028]); determining a third color channel intensity ("intensity

values of primary colors", [0028] where the first primary color is blue) based on the value of a third attribute (color value [0013] for color of blue, [0015],[0028]); and combining the color channel intensities to determine a shading color ([0027]); and shading the selected cell with the shading color, wherein the first color channel is a red color channel, the second color channel is a green color channel, and the third color channel is a blue color channel (color value [0013] for color of red, green, and blue, [0015],[0028]), but fails to explicitly disclose wherein step i) comprises: A) determining a base-zero position of the determined value of the first attribute in a range of allowable values of the first attribute; B) determining a first multiplier by dividing a maximum allowable first color channel intensity by a base zero position of the maximum allowable value of the first attribute; and C) determining the first color channel intensity by multiplying the first multiplier by the base zero position of the determined value of the first attribute, step ii) comprises: A) determining a base-zero position of the determined value of the second attribute in a range of allowable values of the second attribute; B) determining a second multiplier by dividing a maximum allowable second color channel intensity by a base zero position of the maximum allowable value of the second attribute; and C) determining the second color channel intensity by multiplying the second multiplier by the base zero position of the determined value of the second attribute, and step iii) comprises: A) determining a base-zero position of the determined value of the third attribute in a range of allowable values of the third attribute; B) determining a third multiplier by dividing a maximum allowable third color channel intensity by a base zero position of the maximum allowable value of the third attribute; and C) determining the third color channel intensity by multiplying the third multiplier by the base zero position of the determined value of the third attribute.

NOAA teaches for each of three color channels and associated attribute, A) determining a base-zero position of the determined value of the attribute in a range of allowable values of the attribute **(Radar reflectivity, DBZ chart)**; B) determining a multiplier by dividing a maximum allowable color channel intensity by a base-zero position of the maximum allowable value of the attribute **(Radar**

reflectivity, DBZ chart); and C) determining the color channel intensity by multiplying the multiplier by the base-zero position of the determined value of the attribute **(Radar reflectivity, DBZ chart)**. Kitahara and NOAA are analogous art because they are both directed to the same field of endeavor, color assignment. It would have been obvious to an ordinary person skilled in the art at the time of the invention to combine the medium with instructions for configuring a multi-dimensional array of Kitahara with the base-channel and color intensity determination of NOAA in order to easily convey the intensity of a represented condition.

The combination of Kitahara and NOAA fails to explicitly disclose wherein different weather conditions are defined for each individual cell in a multi-dimensional array. Shoji et al. discloses defining weather conditions in the map of virtual world in individual cells of a multi-dimensional array (weather phenomenon on the image displayed, abstract, [0025]). Kitahara et al., NOAA, and Shoji et al. are analogous art because they are related to changing values of attributes on the computer software in order to change the image displayed (different weather and geographical features shown on the image of the virtual world in Shoji et al. and change attributes of the image shown on the display in Kitahara et al.). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the weather conditions as taught by Shoji et al. for the image process software of Kitahara et al. and NOAA because it is possible to give more reality to weather phenomenon that is reflected on an image displayed (Shoji, [0011], [0017]).

The combination of Kitahara, NOAA, and Shoji fails to explicitly disclose wherein there is a plurality of multi-dimensional arrays in which one multi-dimensional array is above another multi-dimensional array such that the user can define different weather conditions in the plurality of multi-dimensional arrays. Microsoft teaching setting user defined clouds and other weather conditions at different layers above the earth **(pages 66-67, Clouds and Thunderstorms)** thus the user can define different weather conditions in the plurality of multi-dimensional arrays where one is above the other. It

would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the user defined multi-dimensional array to represent weather conditions of Kitahara and Shoji with the user defined weather conditions for a flight simulator of Microsoft in order to increase the reality of a weather phenomenon that is reflected on an image displayed **(Shoji [0011], [0017])**.

Response to Arguments

5. Applicant's arguments filed 03/28/08 have been fully considered but they are not persuasive.

6. The objection to the drawings is maintained. Applicant's argument regarding the objection is unpersuasive. Not being discussed in the background of the invention and not described as being prior art is not the metric for whether or not a drawing is prior art. The metric is whether or not only that which is old is illustrated. A computing system as displayed in Figure 1 is old. A computer with operating system, application programs, other program modules and program data is old. A system with system memory including BIOS ROM and RAM for operating system, application programs, other program modules, and program data is old. A processing unit in a computer is old. A video adapter and monitor for a computing system are old. A system bus, removable and non removable non volatile memory interfaces are old. Keyboards, mouse, floppy disc, CD-ROMs, digitizers, output peripheral interfaces, printers and speakers are old. Modems, WANs, network interfaces, LANs, remote computers, and remote application programs are old. The combination of all the aforementioned components is old. None of the aforementioned components nor the combination of the aforementioned components nor the layout of said components is new. See U.S. Patent Application Publication 2003/0215138 A1, Figure 1, published 11/20/03.

7. The 35 U.S.C 112 rejections have been withdrawn due to the amended claims.

8. Applicant's arguments with respect to the prior art rejections have been considered but are moot in view of the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. All claims are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suzanne Lo whose telephone number is (571)272-5876. The examiner can normally be reached on M-F, 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571)272-2297. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kamini S Shah/

Supervisory Patent Examiner, Art Unit 2128

Suzanne Lo
Patent Examiner
Art Unit 2128

/SL/
07/07/08